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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jurgen Huff

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EXAMINER

RICCI, CRAIG D

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,824	Applicant(s) HUFF ET AL.	
	Examiner CRAIG RICCI	Art Unit 1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-15 is/are pending in the application.
- 4a) Of the above claim(s) 10-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1, 3-9 and 14-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of the Claims

1. The amendments filed 11/03/2008 were entered.

Response to Arguments



2. Applicants' arguments, filed 11/06/2008, have been fully considered. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Election/Restrictions

3. Newly submitted claims 10-13 are directed to inventions that are independent or distinct from the invention originally claimed for the following reasons:
4. The invention originally claimed was a composition comprising CuHDO and a diluent, the composition having a pH of at least 4.
5. New claims 10-11 are drawn to a process of making an industrial material which contains an anti-microbial composition which comprises reacting *in situ* a water-soluble salt of HDO and a Cu-containing salt. The original invention and the invention of claims 10-11 are directed to related products and processes. The related inventions are distinct if: (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as

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claimed are a composition and a method of making an industrial material containing said composition formed by a specific process. Accordingly, the inventions as claimed have a materially different design since one is drawn to a composition and the other is drawn to a process of making an industrial material which contains the composition. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

6. New claim 12 is drawn to an industrial material made by the process of claim 10. The original invention and the invention of claim 12 are directed to related products. The related inventions are distinct if: (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed are a composition and an industrial material containing said composition formed by a specific process. Accordingly, the inventions as claimed have a materially different design since one is drawn to a composition and the other is drawn to an industrial material which contains the composition as formed by a specific method. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

7. New claim 13 is drawn to a method for combating and/or killing bacteria etc in an industrial installation, the method comprising treating the industrial installation with a composition comprising CuHDO and optionally a further microbicide. The original invention and the invention of claim 13 are related as product and process of use. The

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inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the process of using the product as claimed can be practiced with another materially different product, such as, for example, boron wood preservatives as evidenced by *Casebolt* (Maritime Park Association, July 1997).

8. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 10-13 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claims 1, 3, 5, 7-9 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by *Goettsche et al* (US 4,761,179).**

11. Instant claim 1, as amended, is drawn to a composition consisting essentially of (A) CuHDO and a diluent, and optionally another microbicidally active component (B),

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wherein the composition has a pH of at least 4, more specifically at least 7 (claim 8) and even more specifically at least 8 to 12 (claim 9).

12. *Goettsche et al* teach a wood preservative comprising CuHDO and water, wherein the pH is not less than 7.5 (Column 1, Lines 46-50). Even more specifically, *Goettsche et al* disclose that "The pH of aqueous impregnating solutions is in general from 8.0 to 10.0, in particular from 8.5 to 9.5" (Column 2, Lines 54-55) and particularly teaches solutions comprising 25% CuHDO and 40% water (Column 4, Lines 10-17, Example 2).

13. Applicant argues that *Goettsche et al* does not anticipate claims 1 and 8-9 as amended because the compositions taught by *Goettsche et al* "in addition to containing CuHDO...contain several other components, including polyamine" (Applicant Argument, Page 4). MPEP 2111.03 states that the transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. *In re Herz*, 537, F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976). Absent a clear indication of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising". See *PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355. In the instant case, it is unclear what the basic and novel characteristics of the instantly claimed composition are (beyond being a composition for combatting and/or killing bacteria, mould, yeast and algae) that the inclusion of other ingredients taught by *Goettsche et al* would materially affect. As such, the settled meaning of the term "consisting essentially of" as defined above in MPEP 2111.03 is applied. Accordingly,

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the composition in claim 1 will be construed as "comprising" any other materials that do not materially affect the basic and novel characteristics of the claimed invention; in other words, the composition recited by claim 1 will be construed as "comprising" any other ingredients that do not materially affect the composition from being usable for combatting and/or killing bacteria, mould, yeast and algae. Notably, there is nothing to indicate to a person of ordinary skill in the art that the other ingredients taught by *Goettsche et al* (such as polyamine) would materially affect the composition from being usable for combatting and/or killing bacteria, mould, yeast and algae. As stated by

If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. *In re De Lajarte*, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). See also *Ex parte Hoffman*, 12 USPQ2d 1061, 1063-64 (Bd. Pat. App. & Inter. 1989)

MPEP 2113.03:

. Applicant

has not introduced any evidence to indicate that the introduction of the additional components taught by *Goettsche et al* would materially change the characteristics of the Applicant's invention. As such, *Goettsche et al* anticipates each of the limitations of instant claims 1 and 8-9 and the rejection is maintained.

14. Instant claims 3 and 5 are drawn to the composition of claim 1 additionally containing another microbicidally active component selected from the group of components recited which includes "alcohols" as well as "quaternary ammonium compounds" (claim 3) and, more specifically, wherein the concentration of each

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component (A) and (B) is from 1-99% by weight (claim 5). In regard to claim 5, component (A) refers to "CuHDO and a diluent" and component (B) refers to "another micobicidally active component" such as, for example, an alcohol. *Goettsche et al* teach "the wood preservatives can also contain an alkanolamine, eg. ethanolamine" (Column 1, Lines 66-67) which is a primary alcohol. Furthermore, *Goettsche et al* specifically disclose formulations containing 25% CuHDO, 25% water, and 12.5% ethanolamine (Column 4, Lines 45-50) which anticipates the range recited by instant claim 5. As stated in MPEP 2131.03:

"[W]hen, as by a recitation of ranges or otherwise, a claim covers several compositions, the claim is 'anticipated' if *one* of them is in the prior art." *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (citing *In re Petering*, 301 F.2d 676, 682, 133 USPQ 275, 280 (CCPA 1962)) (emphasis in original)

. In the instant case, the prior art teaches concentrations of components (A) and (B) which are each within 1 to 99 wt% as recited by instant claim 5.

15. Instant claim 7 is drawn to the composition of claim 1 in the form of a "paste, emulsion or solution or suspension" (claim 7). *Goettsche et al* specifically teach the invention in the form of "an aqueous solution" (Column 1, Line 44).

16. New claim 14 is drawn to an industrial material comprising the composition of claim 1. *Goettsche et al* specifically disclose the impregnation of wood with the composition. Since wood is encompassed by the term "industrial material" (Instant Specification Page 7, Line 19), *Goettsche et al* disclose industrial materials comprising the composition of claim 1.

17. New claim 15 is drawn to the industrial material of claim 14, wherein the CuHDO is formed *in situ* in the industrial material. As discussed above, *Goettsche et al* disclose industrial materials (e.g., wood) comprising the composition of claim 1. Additionally, as

**PRODUCT-BY-PROCESS CLAIMS ARE NOT
LIMITED TO THE MANIPULATIONS OF THE
RECITED STEPS, ONLY THE STRUCTURE
IMPLIED BY THE STEPS**

“[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

stated by MPEP 2113:

. Notably, the claim at issue in *In re Thorpe* was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding them pre-reacted. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. “The fact that the metal carboxylate is not directly added, but is instead produced *in situ* does not change the end product” (MPEP 2113). Similarly, the fact that CuHDO is not directly added to the industrial material taught by *Goettsche et al*, but is instead produced *in situ* does not change the wood taught by *Goettsche et al*.

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18. Applicant argues that preparing CuHDO *in-situ* should be given patentable weight because distinct properties are produced in the industrial material as a result of *in situ* formation of the CuHDO. Applicant's assertion that the instantly claimed industrial material possesses distinct properties from the industrial materials taught by the prior art does overcome the teaching of *Goettsche et al* since there is nothing to indicate that the instantly claimed industrial materials have been chemically altered or modified in some structural way to distinguish them from the industrial materials of *Goettsche et al*. In other words, the fact that CuHDO is not directly added to the industrial material taught by *Goettsche et al*, but is instead produced *in situ* does not chemically modify or structurally change the wood taught by *Goettsche et al*. Accordingly, Applicant's argument is not persuasive.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

21. **Claims 1, 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Goettsche et al* (US 4,761,179).**

22. Instant claim 6 is drawn to the composition of claim 3 wherein the said respective amounts of components (A) and (B) are 40 to 60 wt% each. As discussed above, *Goettsche et al* teach instant claims 1 and 3 wherein the other microbicidally active component (B) is an alcohol. Moreover, *Goettsche et al* teach that "suitable concentrations contain, for example, from 5 to 50% by weight of CuHDO" (Column 2, Lines 8-9). Even more specifically, *Goettsche et al* particularly teach a formulation comprising 25% CuHDO and 20% water (Column 4, Lines 28-33, Example 3) which teaches a concentration of component (A) within the range of 40 to 60% as recited by instant claim 6. However, *Goettsche et al* do not teach alcohols in the range of 40 to 60% by weight. Rather, *Goettsche et al* teach as suitable concentrations "not more than 20% by weight of an alkanolamine" (Column 2, Line 15). However, *Goettsche et al* **also** teach compositions of claim 1 which include a quaternary ammonium salt, which encompasses a microbicidally active component (B) as recited by claim 3. Furthermore, *Goettsche et al* teach "suitable concentrations contain, for example... not more than 50% by weight of a quaternary ammonium salt" (Column 2, Lines 8-16). As

In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)

stated in MPEP 2144.05:

In the

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instance case, the claimed ranges of component (B) as recited by instant claim 6 overlap ranges disclosed by the prior art. Accordingly, claim 6 is *prima facie* obvious.

23. Claims 1 and 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goettsche et al (US 4,761,179) in view of Lorentzen et al (US 5,332,765).

24. Instant claim 1 is taught by *Goettsche et al* as discussed above. Furthermore, *Goettsche et al* teach instant claim 3 wherein the other microbicidally active component is an alcohol.

25. However, *Goettsche et al* do not teach the composition of claim 3 wherein the other active component is "2-bromo-2-nitropropane-1,3-diol", as recited by instant claim 4. *Lorentzen et al* teach microbicidal agents useful in the protection of industrial materials. Moreover, *Lorentzen et al* teach that "the activity and the spectrum of action of the active compound combination according to the invention or of the agents, concentrates or, generally, formulations prepared therewith, is increased if, if appropriate, other antimicrobially active substances, fungicides, insecticides or other active compounds are added to widen the spectrum of the active compound or to achieve specific effects such as, for example, an additional protection against insects" (Column 3, Lines 31-39). Furthermore, *Lorentzen et al* teach "2-bromo-2-nitropropane-1,3-diol" as an example of particularly advantageous component (Column 4, Line 30). Accordingly, it would have been *prima facie* obvious to a person of ordinary skill in the art at the time the invention was made to include another microbicidally active component, specifically 2-bromo-2-nitropropane-1,3-diol, in the formulation taught by *Goettsche et al.*, since *Goettsche et al* teach an antimicrobially active composition

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which includes an alcohol and since *Lorentzen et al* teach that 2-bromo-2-nitropropane-1,3-diol is a particularly useful antimicrobial. Furthermore, *Lorentzen et al* specifically teach the motivation to use multiple microbicides in a single formulation. For the foregoing reasons, claim 4 is *prima facie* obvious.

26. Applicant traverses the rejection stating that “since *Lorentzen* was cited only to show other microbicidal components, the present claims should be found patentable over *Goettsche* in view of *Lorentzen* for the reasons stated above” (Applicant Arguments, Page 6). As discussed above, Applicant’s arguments to *Goettsche et al* are not persuasive. Accordingly, the rejection over *Goettsche et al* in view of *Lorentzen et al* is maintained.

Conclusion

No new ground(s) of rejection are presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to CRAIG RICCI whose telephone number is (571) 270-5864. The examiner can normally be reached on Monday through Thursday, and every other Friday, 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CRAIG RICCI/
Examiner, Art Unit 1614

/Ardin Marschel/

Supervisory Patent Examiner, Art Unit 1614

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